PONY

سلسلة كتب الأستاذ

Programming and Artificial Intelligence

October Revision

By

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1st Secondary

First Term

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October Revision — Model Exams

Model Exam 1

1 Choose the correct answer:

1. The representation of facts using numbers, characters, or symbols is called ..... .
   a. information b. knowledge c. data d. media
2. 🕮 Knowledge means ..... .
   a. copying information
   b. organizing and analyzing information to solve problems
   c. raw data d. rumors
3. 🕮 Which of the following represents 'Information'?
   a. Raw facts
   b. Something that carries meaning or value to the recipient
   c. Unclear symbols
   d. Only numbers
4. If someone buys a music CD and distributes copies to his friends, this refers to ..... .
   a. propagation b. reproducibility
   c. persistence d. none of them
5. Rumors and false information that remain online for a long time refer to the ..... of information.
   a. propagation b. reproducibility
   c. persistence d. none of them

2 Put (T) or (F):

1. The Internet and radio are examples of recording media. ( )
2. Information has characteristics such as persistence and propagation. ( )
3. The meaning of information never changes depending on the recipient. ( )

4 Primary information is obtained through personal research or experience. ( )

5 📖 Secondary information is obtained from third party, such as books and research. ( )

3 Write the scientific term:

1 It is the ability to understand the meaning and characteristics of media and to accurately interpret information. (.....)

2 It is the property of information that allows it to spread widely in a short period of time. (.....)

3 It is the information that includes location embedded in photos or video. (.....)

4 They are crimes involving the misuse of computers and networks. (.....)

5 It is false information that is deliberately spread or baseless rumors. (.....)

Model Exam 2

1 Choose the correct answer:

1 📖 Which of the industrial property rights protect the shape or structure of a product?

a. Trademark rights b. Design rights
c. Utility model rights d. Patent rights

2 📖 The protection period of copyright lasts ..... .

a. the lifetime of the creator only
b. 20 years from publication
c. 50 years after the creator's death
d. a fixed 100 years

3 When you allow others to use your photo only if they display your name and don't alter the work, which Creative Commons licenses apply?

a. BY + ND b. BY + NC c. NC + SA d. ND + SA

4 A famous singer's concert was uploaded online without their consent. This violates the ..... .

a. Neighboring Rights
b. Industrial Rights
c. Design Rights
d. Patent Law

5 Posting Naguib Mahfouz's novel "The Thief and Dogs" on a website without permission is ..... .

a. patent violation
b. neighboring rights
c. fair use
d. copyright infringement

2 Put (T) or (F):

1 📖 Industrial property rights include patent rights and trademarks. ( )

2 Personal information is protected under the Act until 50 years after the individual's death. ( )

3 Trademark rights can be renewed every 10 years. ( )

4 The (NC) Creative Commons mark prohibits using works for profit. ( )

5 📖 Copyright is established when created and does not require registration. ( )

3 Write the scientific term:

1 It is the information related to living individuals that can identify them. (.....)

2 It is a license that defines sharing and usage rules. (.....)

3 It is the organization handling industrial property right applications. (.....)

4 It means using a portion of someone else's work fairly and clearly indicated within your own text. (.....)

5 It means using a copyrighted work without the creator's permission. (.....)

Model Exam 3

1 Choose the correct answer:

1. During an online class, the school network was down for several hours. This situation indicates a loss of ..... .
   a. confidentiality b. integrity c. availability d. security
2. 🕮 Which of the following malware replicates itself and spreads over the Internet?
   a. Trojan horse b. Worm c. Spyware d. Ransomware
3. 🕮 Which of the following threats collects personal information without the user's knowledge?
   a. Ransomware b. Spyware c. Virus d. Trojan horse
4. 🕮 Which of the following cybercrimes depends on using another person's username or password?
   a. Firewall
   b. Violation of unauthorized access law
   c. Manipulation of stored data d. Phone fraud
5. A company installed a system that blocks unauthorized users from outside. This system is called a ..... .
   a. Trojan horse b. keylogger c. router d. firewall

2 Put (T) or (F):

1. Malware includes computer viruses, worms, and spyware. ( )
2. 🕮 Biometric authentication relies on a person's characteristics, such as fingerprints and irises. ( )
3. Dumpster diving refers to checking the computer's recycle bin for deleted files. ( )
4. Phishing emails are designed to steal passwords and financial information. ( )
5. A one-time password can be reused for multiple logins. ( )

3 Match:

Column (A)	Column (B)
1 Cracking	a. displays advertisements that the user did not intend to see.
2 Adware	b. is malicious software including computer viruses and Trojan horses.
3 Spyware	c. is illegally extracting information from someone else's credit card or bank card.
4 Malware	d. is the act of illegally infiltrating a computer to tamper with, erase, or steal data.
5 Skimming	e. is the software that leaks the data stored on a computer to the outside.

1 ..... 2 ..... 3 ..... 4 ..... 5 .....

Model Exam 4

1 Choose the correct answer:

1 Which of the following is an example of knowledge-based authentication?

a. Fingerprint
b. Smart card
c. Password and PIN
d. SMS verification

2 $10_{(2)} - 1_{(2)}$ equals ..... .

a. $0_{(2)}$ b. $1_{(2)}$ c. $10_{(2)}$ d. $11_{(2)}$

3 A student used a paragraph from a novel in his essay with quotation marks and citation. This action is ..... .

a. copyright infringement
b. a quotation
c. trademark use
d. neighboring rights

4 In a company, an employee was looking over another's shoulders to steal their password. This act is called ..... .

a. dumpster diving
b. shoulder surfing
c. impersonation
d. social networking

5 Two-step authentication relies on ..... .

a. two different types of factors

b. two pieces of information of the same type of factor

c. fingerprint + password

d. SMS code + smart card

2 Put (T) or (F):

1 A utility model protects products' logos and brand names. ( )

2 Posting someone's health or financial status online, even with good intent, violates personal information laws. ( )

3 Confidentiality, integrity, and availability are essential elements of information security. ( )

4 Works created by children or amateurs cannot be copyrighted. ( )

5 It is preferable for the password to be short so that it is easy to remember. ( )

3 Match:

Column (A)	Column (B)
1 Privacy Rights	a. are weaknesses in the software that attackers can exploit.
2 Utility Model Rights	b. is an authentication using an item that the individual possesses such as an IC card.
3 Design Rights	c. protect ideas for shapes or structures of products.
4 Security holes	d. are the rights to keep one's private life undisclosed.
5 Possession-based authentication	e. protect the external appearance and patterns of products.

1 ..... 2 ..... 3 ..... 4 ..... 5 .....

Model Exam 5

1 Choose the correct answer:

1 The basic unit of information is ..... .
a. 1 megabyte b. 1 kilobyte c. 1 byte d. 1 bit

2 One of the causes of character corruption is the ..... .
a. weak processor speed
b. low storage capacity
c. different font types
d. mismatch between encoding and decoding methods

3 When converting the hexadecimal number A4(16) to binary, the result is ..... .
a. $10011010_{(2)}$ b. $10100100_{(2)}$
c. $11001001_{(2)}$ d. $11100011_{(2)}$

4 Which of the following is an example of digital character encoding?
a. ASCII b. Sans-serif
c. Semi-cursive d. Font

5 If Jana adds the binary numbers $1010_{(2)} + 110_{(2)}$, the correct sum is ..... .
a. $10100_{(2)}$ b. $10000_{(2)}$ c. $1111_{(2)}$ d. $1100_{(2)}$

6 Which of the following correctly represents the relationship between storage units?
a. 1 MB < 1 KB < 1 GB b. 1 TB < 1 GB < 1 MB
c. 1 KB < 1 MB < 1 GB < 1 TB d. 1 GB < 1 MB < 1 KB

7 The number of possible probabilities to represent 3 bits is ..... .
a. 2 b. 4 c. 8 d. 16

2 Put (T) or (F):

1 When converting from binary to hexadecimal, the binary number is divided into groups of 8 bits. ( )

2 📖 The font is the shape data of characters corresponding to character symbols. ( )

3 Binary numbers use the digits 0–9 to represent information. ( )

4 📖 The Unicode standard was designed to collect character symbols from different world languages into one system. ( )

5 📖 1 byte equals 8 bits and can represent 256 different probabilities. ( )

6 The binary representation of the decimal number 39 is 10101. ( )

7 The hexadecimal digit D equals 14 in decimal. ( )

8 📖 Encoding is the process of converting digital data into readable characters. ( )

Answers

Model Exam 1

1 1 c 2 b 3 b 4 b
5 c

2 1 ✗ 2 ✓ 3 ✗ 4 ✓
5 ✓

3 1 Media literacy
2 Propagation
3 Geotagging
4 Cybercrimes 5 Disinformation

Model Exam 2

1 1 c 2 c 3 a 4 a
5 d

2 1 ✓ 2 ✗ 3 ✓ 4 ✓
5 ✓

3 1 Personal information
2 Creative Commons License
3 Egypt Patent Office
4 Quotation
5 Copyright infringement

Model Exam 3

1 1 c 2 b 3 b 4 b
5 d

2 1 ✓ 2 ✓ 3 ✗ 4 ✓
5 ✗

3 1 d 2 a 3 e 4 b
5 c

Model Exam 4

1 1 c 2 b 3 b 4 b
5 b

2 1 ✗ 2 ✓ 3 ✓ 4 ✗
5 ✗

3 1 d 2 c 3 e 4 a
5 b

Model Exam 5

1 1 d 2 d 3 b 4 a
5 b 6 c 7 c

2 1 ✗ 2 ✓ 3 ✗ 4 ✓
5 ✓ 6 ✗ 7 ✗ 8 ✗